Innovations Showcase

T & E First-Round Winner
Innovations Challenge

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Prepared by Transportation Planning
Missouri Department of Transportation

Lighted Falling Weight Deflectometer

Description

The Lighted Falling Weight Deflectometer (FWD) is used to test pavement condition by applying a load, through a load cell, onto the pavement and measuring the resulting pavement deflections. When the FWD is used to assess concrete pavement, the FWD load cell must be as close to the pavement joint as possible, especially when assessing a joint for load transfer. The FWD is a trailer-mounted apparatus, and the FWD load cell location is adjusted by moving the vehicle towing the FWD trailer. The FWD has a camera mounted by the load cell so the FWD operator can adjust the load cell location near the joint. Without the camera, the FWD operator would have to adjust its location using a spotter outside of the vehicle.

Benefit

Night work was inefficient and unsafe since a spotter outside the vehicle was necessary to line up the FWD load cell and the camera could not be used since there was no light for it. By adding the light next to the camera, the workers are able to line up the load cell without a spotter during night operations, which greatly improves safety.

Materials and Labor

Materials: $33
Labor: 3 hours

For More Information Contact:

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Additional photos can be seen by accessing the Innovations Challenge SharePoint page at: http://sharepoint/systemdelivery/TP/Documents/InnovationsChallenge.aspx.